

AMENDMENT AND RESPONSE TO OFFICE ACTION

Amendment

The Claims

1. (currently amended) A bacterial strain for production of ~~a fermentation product~~ selected from the group consisting of antibiotics, organic acids, amino acids, proteins, vitamins, polyhydroxyalkanoates, ~~and polysaccharides~~, wherein the bacterial strain is selected from the group consisting of *Ralstonia eutropha*, *Pseudomonas putida* and *Escherichia coli* and is genetically modified to express a heterologous nuclease gene, wherein the nuclease gene product is secreted into the periplasmic space and released when the bacteria is lysed.
2. (previously presented) The bacterial strain of claim 1 wherein the nuclease gene product is released in an amount effective to degrade at least 95% of all of the nucleic acid released following lysis of the cells in less than 24 hours and reduce the viscosity of a cell lysate in a bacterial cell culture having a density of at least 50 g/l so that recovery of the product is enhanced.
3. (original) The bacterial strain of claim 2 which produces a polyhydroxyalkanoate to levels of at least 40% of its dry cell weight.
4. (previously presented) The bacterial strain of claim 1 for use in an aqueous process to manufacture poly(3-hydroxyalkanoate) granule suspension which is essentially free of nucleic acids.
5. (cancelled)
6. (original) The bacterial strain of claim 1 wherein the nuclease gene is a heterologous gene obtained from an organism other than the bacterial strain.

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7. (currently amended) A bacterial strain for production of a fermentation product selected from the group consisting of antibiotics, organic acids, amino acids, proteins, vitamins, polyhydroxyalkanoates, and polysaccharides, wherein the bacterial strain is selected from the group consisting of *Ralstonia eutropha*, *Pseudomonas putida* and *Escherichia coli* and is genetically modified to express a heterologous nuclease gene integrated into the chromosome of the bacterial host, wherein the nuclease gene product is secreted into the periplasmic space and released when the bacteria is lysed ~~lyzed by osmotic shock~~, wherein the nuclease gene is ~~integrated into a host strain selected from the group consisting of *Ralstonia eutropha*, *Methylobacterium organophilum*, *Methylobacterium extorquens*, *Aeromonas caviae*, *Azotobacter vinelandii*, *Alcaligenes latus*, *Pseudomonas oleovorans*, *Pseudomonas fluorescens*, *Pseudomonas putida*, *Pseudomonas aeruginosa*, *Pseudomonas acidophila*, *Pseudomonas resinovorans*, *Escherichia coli*, and *Klebsiella*.~~

8. (original) The bacterial strain of claim 1 wherein the nuclease is expressed in an amount effective to degrade at least 95% of all of the nucleic acid released following lysis of the cells in less than 24 hours.

Claims 9-10. (cancelled)

11. (withdrawn – currently amended) A fermentation process comprising adding to a growth medium a bacterial strain for production of a fermentation product selected from the group consisting of antibiotics, organic acids, amino acids, proteins, vitamins, polyhydroxyalkanoates, and polysaccharides, wherein the bacterial strain is selected from the group consisting of *Ralstonia eutropha*, *Pseudomonas putida* and *Escherichia coli* and is

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genetically modified to express a heterologous nuclease gene, wherein the nuclease gene product is secreted into the periplasmic space and released when the bacteria is ~~lysed~~ lyzed by osmotic shock.

12. (withdrawn - currently amended) The ~~method~~ process of claim 11, wherein the bacterial strain is grown to cell densities of at least 50 g/l, and the nuclease gene product is released in an amount effective to degrade at least 95% of all of the nucleic acid released following lysis of the cells in less than 24 hours and reduce the viscosity of a cell lysate in a bacterial cell culture having a density of at least 50 g/l so that recovery of the product is enhanced.

13. (cancelled)

14. (withdrawn - currently amended) The ~~method~~ process of claim 12 further comprising growing the bacterial strain to produce levels of at least 40% of its dry cell weight.

15. (withdrawn - currently amended) The ~~method~~ process of claim 11 further comprising lysing the cells.

16. (withdrawn - currently amended) The ~~method~~ process of claim 14 further comprising using an aqueous process to manufacture a poly(3-hydroxyalkanoates) granule suspension which is essentially free of nucleic acids.

Claims 17 and 18. (cancelled)

19. (withdrawn - currently amended) A fermentation process comprising adding to a growth medium a bacterial strain for production of a ~~fermentation product~~ selected from the group consisting of antibiotics, organic acids, amino acids, proteins, vitamins,

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polyhydroxyalkanoates, and polysaccharides, wherein the bacterial strain is selected from the group consisting of *Ralstonia eutropha*, *Pseudomonas putida* and *Escherichia coli* and is genetically modified to express a heterologous nuclease gene integrated into the chromosome of the bacterial strain, wherein the nuclease gene product is secreted into the periplasmic space and released when the bacteria is lysed ~~lyzed by osmotic shock, and~~
~~wherein the nuclease gene is integrated into a host strain selected from the group consisting of *Ralstonia eutropha*, *Methylobacterium organophilum*, *Methylobacterium extorquens*, *Aeromonas caviae*, *Azotobacter vinelandii*, *Alcaligenes latus*, *Pseudomonas oleovorans*, *Pseudomonas fluorescens*, *Pseudomonas putida*, *Pseudomonas aeruginosa*, *Pseudomonas acidophila*, *Pseudomonas resinovorans*, *Escherichia coli*, and *Klebsiella*.~~

Claim 20. (cancelled)

21. (withdrawn - currently amended) The ~~method~~ process of claim 11 wherein the strain expresses nuclease into the periplasmic space in an amount effective to degrade at least 95% of all of the nucleic acid released following lysis of cells in less than 24 hours.

Claims 22-23. (cancelled)